



NLM's Online Playground: K-12 Health & Science Information Resources for Teachers & Students

CAROLYN MARTIN, MLS, AHIP CONSUMER HEALTH COORDINATOR NATIONAL NETWORK OF LIBRARIES OF MEDICINE PACIFIC NORTHWEST REGION MARTINC4@UW.EDU



Introduction

Medicine/Health

Environmental Health

Genomics/Genetics

Interdisciplinary

Career Information



Who We Are

NIH

- National Institutes of Health
- Nation's research agency

NLM

- National Library of Medicine
- World's largest biomedical library

NNLM

- National Network of Libraries of Medicine
- Program of the NLM comprised of 8 Regional Libraries (RMLs) and 6 offices

PNR

- Pacific Northwest Region (NNLM PNR)
- Is one of the 8 RMLs
- Serves Alaska, Idaho, Montana, Oregon, Washington







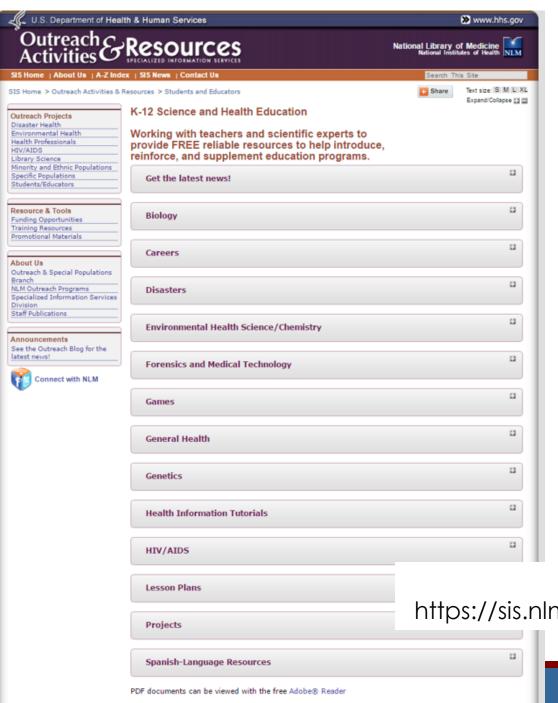


NNLM

https://nnlm.gov/

The mission of NNLM is to advance the progress of medicine and improve the public health by:

- Providing all U.S. health professionals with equal access to biomedical information
- Improving the public's access to information to enable them to make informed decisions about their health



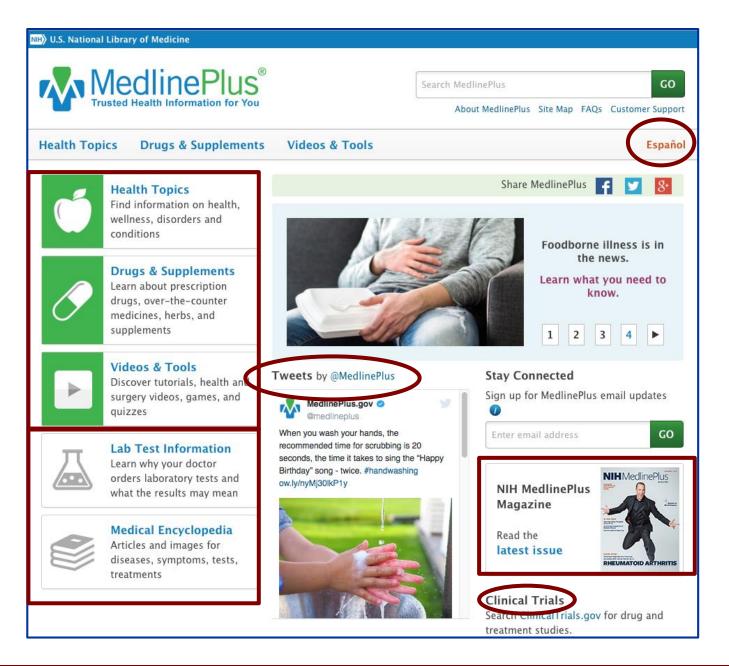


NLM K-12 Resources

https://sis.nlm.nih.gov/outreach/k12.html



Medicine/Health





- Links to reliable, authoritative health websites
- •Health Topics on children/teens
- Easy-to-read articles
- Medical dictionary
- Medical encyclopedia
- Links to local services
- English, Spanish and other languages
- No Advertisements!

<u>MedlinePlus</u>

https://medlineplus.gov/

Home → Health Topics

Health Topics









Read about symptoms, causes, treatment and prevention for over 1000 diseases, illnesses, health conditions and wellness issues. MedlinePlus health topics are regularly reviewed, and links are updated daily.

Find topics A-Z

A B C D E F G H I J K L M N O P Q R S T U V W XYZ List of All Topics

Body Location/Systems



Blood, Heart and Circulation



Bones, Joints and Muscles



Brain and Nerves



Digestive System



Ear, Nose and Throat



Endocrine System



Eyes and Vision



Immune System



Kidneys and Urinary System



Lungs and Breathing



Mouth and Teeth



Skin, Hair and Nails



Female Reproductive System



Male Reproductive System

Disorders and Conditions

Cancers

Diabetes Mellitus

Genetics/Birth Defects

Infections

Injuries and Wounds

Mental Health and Behavior

Metabolic Problems

Poisoning, Toxicology, Environmental

Health

Pregnancy and Reproduction

Substance Abuse Problems

Diagnosis and Therapy

Complementary and Alternative Therapies

Diagnostic Tests

Drug Therapy

Surgery and Rehabilitation

Symptoms

Transplantation and Donation

Demographic Groups

Children and Teenagers

Men

Population Groups

Seniors

Women

Health and Wellness

Disasters

Fitness and Exercise

Food and Nutrition

Health System

Personal Health Issues

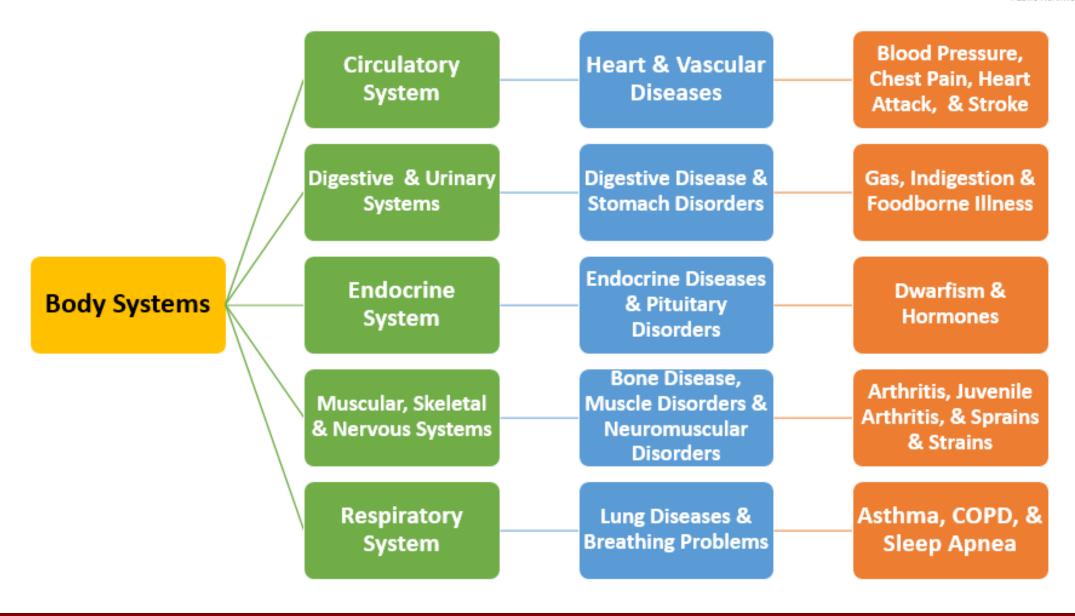
Safety Issues

Sexual Health Issues

Social/Family Issues

Wellness and Lifestyle









reports that the virus has spread through blood transfusions. There have been outbreaks of Zika virus in the United States, Africa, Southeast Asia, the Pacific Islands, parts of the Caribbean, and Central and South America.

MEDICAL ENCYCLOPEDIA

Zika virus disease

Health Topics

Drugs & Su

Home → Health Topics → Zika Virus

Zika Virus

Also called: Zika

On this page

Basics

- Summary
- Start Here
- Symptoms
- Diagnosis and Tests
- Prevention and Risk Factors
- Treatments and Therapies

Research

- Statistics and Research
- Clinical Trials
- Journal Articles

Summary

Zika is a virus that is spread mostly pregnancy or around the time of birl reports that the virus has spread thr in the United States, Africa, Souther

Most people who get the virus do not get sick. a fever, rash, joint pain, and conjunctivitis (pink) after being bitten by an infected mosquito.

A blood test can tell whether you have the infec Drinking lots of fluids, resting, and taking acetal

Zika can cause microcephaly (a serious birth demothers were infected while pregnant. The Cer that pregnant women do not travel to areas whe travel, first talk to your doctor. You should also I

- Use insect repellent
- · Wear clothes that cover your arms, legs,
- · Stay in places that have air conditioning

Centers for Disease Control and Prevention

Start Here

- Zika Virus (Centers for Disease Control and P
- Zika Virus and Complications: Questions
- Zika Virus Fact Sheet (World Health Organiz Also in Spanish

Symptoms

 Symptoms of Zika (Centers for Disease Cont Also in Spanish

Diagnosis and Tests

. Zika Testing and Follow-Up (Centers for Dis

- Zika and Guillain-Barré Syndrome (Centers for Disease Control and Prevention)
 Also in Spanish
- Zika Travel Information (Centers for Disease Control and Prevention)
 Also in Spanish

Specifics

• Dispelling Rumours Around Zika and Complications (World Health Organization)

Videos and Tutorials

- Zika Virus and Pregnancy
- (American College of Obstetricians and Gynecologists, Centers for Disease Control and Prevention)

Statistics and Research

- · Areas with Zika (Centers for Disease Control and Prevention)
- Zika Virus NH) (National Institute of Allergy and Infectious Diseases)
- Zika Virus: Protecting Pregnant Women and Babies (Centers for Disease Control and Prevention)
 Also in Spanish

Clinical Trials

ClinicalTrials.gov: Zika Virus NH) (National Institutes of Health)

Journal Articles

References and abstracts from MEDLINE/PubMed (National Library of Medicine)

- Article: Mosquito control practices and perceptions: An analysis of economic stakeholders...
- Article: In Silico Designed Axl Receptor Blocking Drug Candidates Against Zika...
- Article: Mapping Putative B-Cell Zika Virus NS1 Epitopes Provides Molecular Basis...
- Zika Virus -- see more articles

Children

• Fact Sheet: What Parents Need to Know About Zika Virus (Administration for Children and Families)





NIH) U.S. National Library of Medicine



Health Topics Drugs & Supplements

Home → Health Topics → Anatomy

Anatomy

On this page	
Basics Summary Start Here	Learn More Related Issu Specifics
Research No links available	Resources No links ava

Summary

Anatomy is the science that studies the structure descriptions and pictures of the human body's par

Start Here

- Anatomy & Physiology NH (National Cancer
- . Body Basics (Nemours Foundation)
- Introduction to the Human Body NIH (Nation)
- Visible Human Project NH (National Library)

Related Issues

- Inside the Cell NIH (National Institute of General
- Life and Death of a Neuron NIH (National Inst
- · Proteins Are the Body's Worker Molecules

Health Topics Drugs & Supplements Videos

Home → Health Topics → Blood

Blood

On this page	
Basics	Learn More
SummaryStart Here	Related IssuesSpecifics
Research Clinical Trials Journal Articles	Resources Reference Desk Find an Expert

Summary

Your blood is made up of liquid and solids. The liquid part, calle protein. Over half of your blood is plasma. The solid part of your blood cells, and platelets.

Red blood cells (RBC) deliver oxygen from your lungs to your ti (WBC) fight infection and are part of your immune system. Plate cut or wound. Bone marrow, the spongy material inside your bo constantly die and your body makes new ones. Red blood cells about 6 days. Some white blood cells live less than a day, but o

There are four blood types: A, B, AB, or O. Also, blood is either have type A blood, it's either A positive or A negative. Which type blood transfusion. And your Rh factor could be important if you between your type and the baby's could create problems.

Blood tests such as blood count tests help doctors check for ce help check the function of your organs and show how well treat blood may include bleeding disorders, excessive clotting and pl blood, you may need a transfusion.



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Health Topics **Drugs & Supplements** Videos & Tools

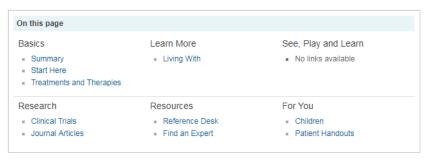
Español

GO

Home → Health Topics → Gas

Gas

Also called: Belch, Burp, Eructation, Flatulence, Flatus



Summary

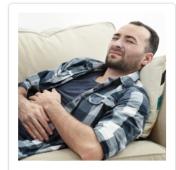
Everyone has gas. Most people pass gas 13 to 21 times a day. Passing gas through the mouth is called belching or burping. Passing gas through the anus is called flatulence. Most of the time gas does not have an odor. The odor comes from bacteria in the large intestine that release small amounts of gases that contain sulfur.

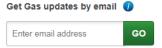
Gas in the digestive tract comes from two sources: air that you swallow and the breakdown of undigested food by bacteria in the large intestine. Certain foods may cause gas. Foods that produce gas in one person may not cause gas in another.

You can reduce the amount of gas you have by

- · Drinking lots of water and non-fizzy drinks
- · Eating more slowly so you swallow less air when you eat
- · Avoiding milk products if you have lactose intolerance

Medicines can help reduce gas or the pain and bloating caused by gas. If your symptoms still bother you, see your health care provider.





MEDICAL ENCYCLOPEDIA

Abdominal bloating

Belching

Bland diet

Gas - flatulence

Related Health Topics



Search MedlinePlus GO

Asthma - quick-relief drugs

Aethma what to ack your doctor



Health Topics Drugs & Supplements Videos & Tools

Home → Health Topics → Asthma in Children

Asthma in Children

Also called: Childhood asthma

On this page Basics Learn More See, Play and Learn Living With Summary Images Start Here Related Issues Health Check Tools Specifics Videos and Tutorials Latest News Genetics Games Diagnosis and Tests Prevention and Risk Factors Treatments and Therapies Research Resources For You Statistics and Research Reference Desk Children Clinical Trials Find an Expert Teenagers Patient Handouts Journal Articles

Summary

Asthma is a chronic disease that affects your airways. Your airways are tubes that carry air in a of your lungs. If you have asthma, the inside walls of your airways become sore and swollen.

In the United States, about 20 million people have asthma. Nearly 9 million of them are children Children have smaller airways than adults, which makes asthma especially serious for them. C with asthma may experience wheezing, coughing, chest tightness, and trouble breathing, especially in the morning or at night.

Many things can cause asthma, including

- · Allergens mold, pollen, animals
- Irritants cigarette smoke, air pollution
- Weather cold air, changes in weather





Search NCCIH



Health Topics

Drugs & Supplem

Home → Drugs, Herbs and Supplements

Drugs, Herbs and Supp

Drugs

Learn about your prescription drugs and special precautions, and more.

Browse by generic or brand n

Α	В	С	D	Е	F	G	Н
٧	w	X	Υ	z	0-9		

For FDA approved labels included in dru

Herbs and Supplements

Browse dietary supplements and herbal and drug interactions.

All herk

Prescription and over-the-counter medical Information, copyrighted by the American Bethesda, Maryland; Copyright © 2017. A

Home → Drugs, Herbs and Supplements → Oxycodone

Oxycodone

pronounced as (ox i koe' done)

Why is this medication prescribed?

How should this medicine be used?

Other uses for this medicine

What special precautions should I follow?

What special dietary instructions should I follow?

What should I do if I forget a dose?

IMPORTANT WARNING:

Oxycodone may cause serious or life-threatening breath your dose is increased. Your doctor will monitor you care breathing or asthma. Your doctor will probably tell you no such as chronic obstructive pulmonary disease (COPD; that increases the amount of pressure in your brain. The are weak or malnourished due to disease. If you experie medical treatment: slowed breathing, long pauses betwe

Taking certain other medications with oxycodone may incyour doctor and pharmacist if you are taking or plan to ta in PrevPac) and erythromycin (Erytab, Erythrocin); certai (Nizoral), and voriconazole (Vfend); benzodiazepines su diazepam (Diastat, Valium), estazolam, flurazepam, lora: carbamazepine (Carbatrol, Epitol, Equetro, Tegretol, Teri medications for human immunodeficiency virus (HIV) inc phenytoin (Dilantin, Phenytek); rifabutin (Mycobutin), rifa doctor may need to change the doses of your medicatior and you develop any of the following symptoms, call you lightheadedness, extreme sleepiness, slowed or difficult which symptoms may be serious so they can call the doc

U.S. Department of Health and Human Services

National Institutes of Health



NIH...Turning Discovery Into Health

Información en Español

Health Info Research Grants & Funding Training News & Events About NCCIH

Tea Tree Oil

Share:









On This Page

- Background
- How Much Do We Know?
- What Have We Learned?
- What Do We Know About Safety?
- Keep in Mind
- For More Information
- Key References



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This fact sheet provides basic information about tea tree oil—common names, usefulness and safety, and resources for more information.

Print this page

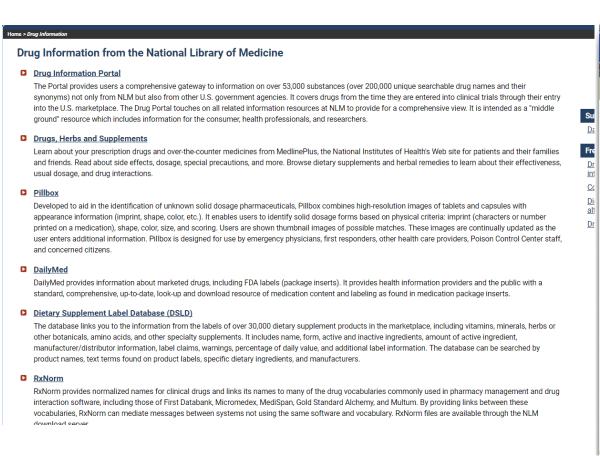


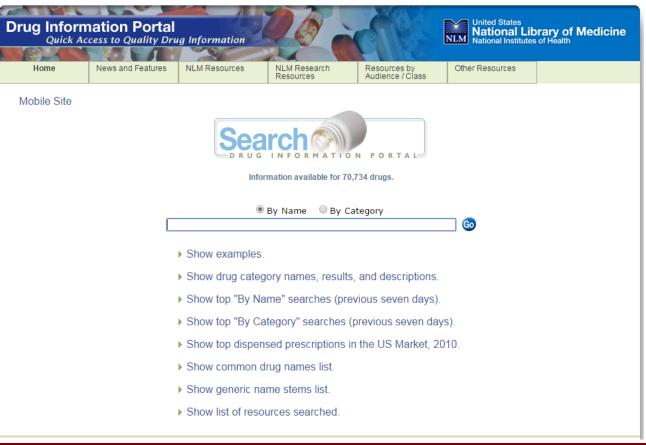


NLM Drug information

NLM DRUG INFORMATION RESOURCES

DRUG INFORMATION PORTAL







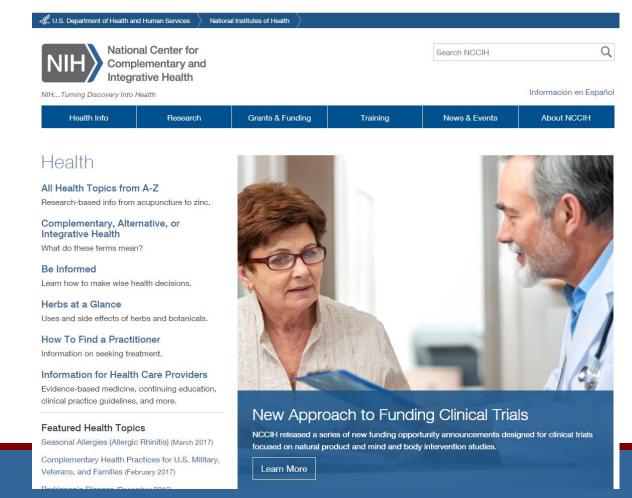
NIH Supplements Information

OFFICE OF DIETARY SUPPLEMENTS



NATIONAL CENTER FOR COMPLEMENTARY

AND INTEGRATIVE HEALTH















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Health Topics

Drugs & Supplements

National Instit on Drug Abuse Advancing Addiction

Teens

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Games and Quizzes

Search by Topic

Enter keyword, title, etc.

Home → Videos & Tools

Videos & Tools

Watch health videos on topics such as anatomy, body sy Check your health with calculators and guizzes.



Health Videos

View videos of anatomy and body systems and conditions affect them.



Surgery Videos

Find videos of operations and surgical proc



Health Check Tools

Check your health with interactive calculato questionnaires.



Games

Boost your health knowledge by playing inte games.

Test Your Knowledge

Test Your Knowled

See if you're up for the challenge. Exercise

Anabolic Steroids

Cocaine

Hallucinogens

Inhalants

Marijuana

Methamphetamine

Nicotine

Opioids

f y t SHARES · 57

HOME » GAMES AND OUIZZES

Are You Dating a Player?

How Healthy is Your

SHARES - 486

Relationship Checkup!

SHARES - 23

Relationship?

Which Pop Diva Is Your Relationship Role Model?

SHARES - 7

What's Your Relationship Style?

SHARES - 9

Should You Make it Official?

⊕ SHARES - 2

Which Celebrity Couple Are You?

SHARES - 0

that Charlet Vorm No

FFATURED POLL

STAYTEEN POLL

When you break up with someone, do you unfollow them?

When you break up with someone, do you unfollow them?

Yes! I can't move on if I'm constantly seeing pictures of my ex.

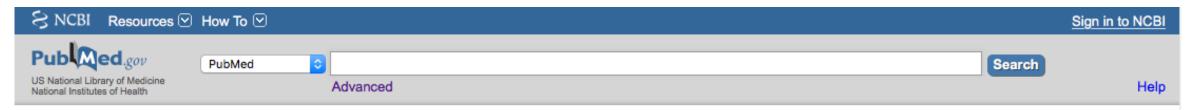
No way-I want to know what they're up

It depends on the situation.

69%

Total votes: 1795

RECENT POLLS





PubMed

PubMed comprises more than 28 million citations for biomedical literature from MEDLINE, life science journals, and online books. Citations may include links to full-text content from PubMed Central and publisher web sites.

Using PubMed	PubMed Tools	More Resources
PubMed Quick Start Guide	PubMed Mobile	MeSH Database
Full Text Articles	Single Citation Matcher	Journals in NCBI Databases
PubMed FAQs	Batch Citation Matcher	Clinical Trials
PubMed Tutorials	Clinical Queries	E-Utilities (API)
New and Noteworthy	Topic-Specific Queries	<u>LinkOut</u>

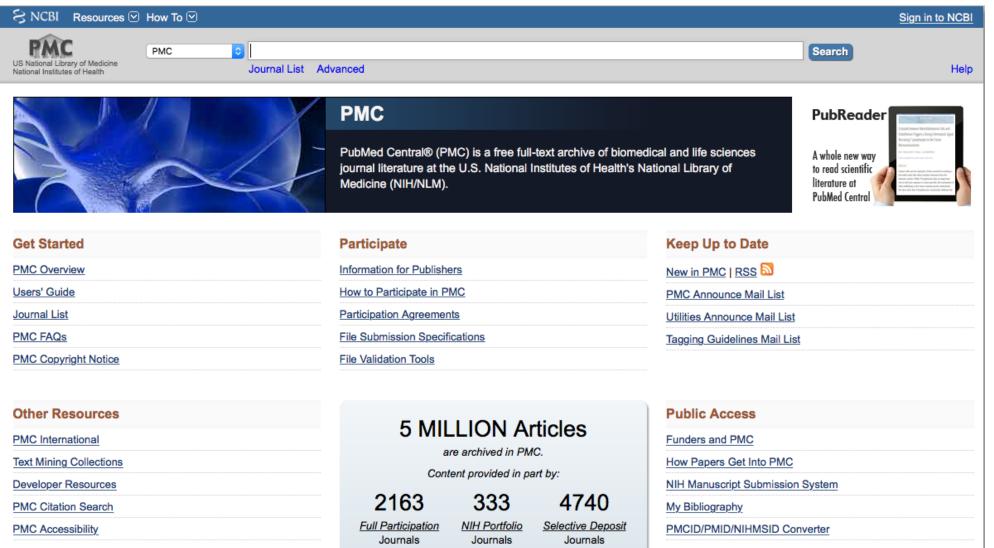
PubMed



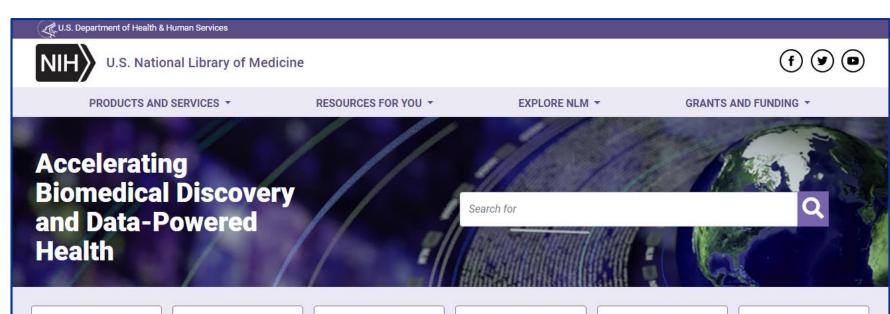
PubMed Tutorials



- New! PubMed Online Training:
 PubMed Essentials, PubMed
 Labs, Making PubMed Work for
 You
- Tutorials
- •Quick Tours
- Webcasts and Videos
- Classes
- Handouts



PubMed Central





PubMed

Citations for biomedical literature



MedlinePlus

Reliable, up-to-date health information for you



Open-i

An experimental multimedia search engine



TOXNET

Search databases on hazardous chemicals



ClinicalTrials.gov

A database of clinical studies, worldwide



BLAST

Basic Local Alignment Search Tool

News and Highlights



Director's Blog

An Oath Grounded in the Constitution



NCBI Insights

Improved Search Now Available Across NCBI Databases



In Focus

Talking Hardware and Software with OCCS Director Ivor D'Souza



Circulating Now

Making the Case for History in Medical Education

NLM home page



Health Information





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Healthy Parenting

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.



News & Events

INSTITUTES, CENTERS, AND OFFICES

Institutes at NIH

List of NIH Institutes, Centers, and Offices

Directors of NIH Institutes and Centers

NIH Institute and Center Contact Information

NIH Office of the Director

List of NIH Institutes, Centers, and Offices

NIH Offices

NIH Office of the Director (OD)

The Office of the Director is the central office at NIH for its 27 Institutes and Centers. The OD is responsible for setting policy for NIH and for planning, managing, and coordinating the programs and activities of all the NIH components. OD program offices include the Office of AIDS Research and the Office of Research on Women's Health, among others.

NIH Institutes

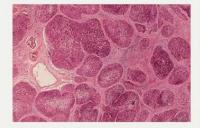
National Cancer Institute (NCI) — Est. 1937

NCI leads a national effort to eliminate the suffering and death due to cancer. Through basic and clinical biomedical research and training, NCI conducts and supports research that will lead to a future in which we can prevent cancer before it starts, identify cancers that do develop at the earliest stage, eliminate cancers through innovative treatment interventions, and biologically control those cancers that we cannot eliminate so they become manageable, chronic diseases.

National Eye Institute (NEI) — Est. 1968

The National Eye Institute's mission is to conduct and support research, training, health information dissemination, and other programs with respect to blinding eye diseases, visual disorders, mechanisms of visual function, preservation of sight, and the special

In the News



Cirrhosis

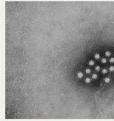
Information on this condition in which the liver is perminatly damaged.



Diabetes

Grants & Funding

Two diabetes medications don't slow progression of type 2 diabetes in youth.



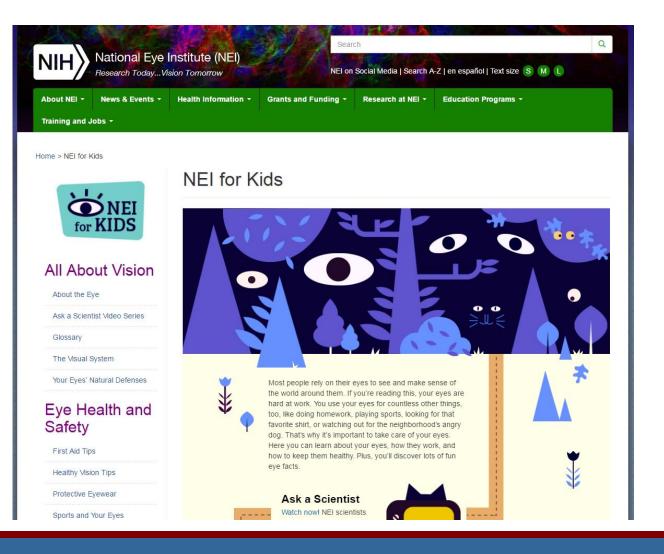
Hepatitis A

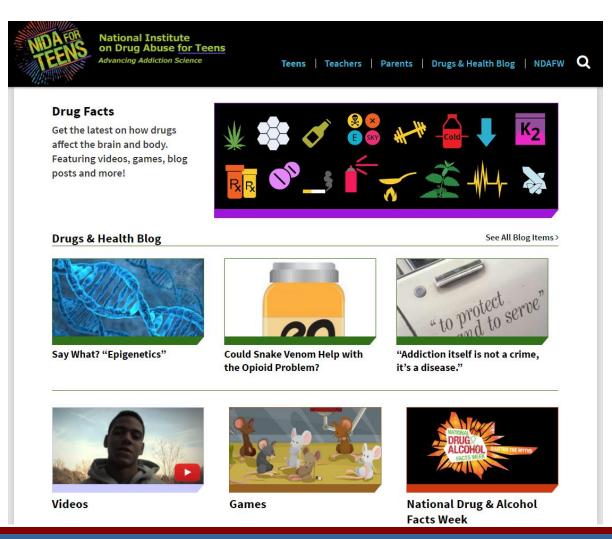
Diagnosis, treatment and p





NIH for Kids and Teens









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NIH Employee Intranet Staff Directory En Español

Health Information Research & Training **Grants & Funding News & Events** Institutes at NIH **About NIH** RESEARCH & TRAINING

Research & Training

Science Highlights

Science Education

Research in NIH Labs & Clinics

Training Opportunities

Library Resources

Research Resources

Clinical Research Resources

Safety, Regulation & Guidance

Medical Research Initiatives

Science Education



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On this page

- · Resources for Students
- · Resources for Educators

Resources for Students



NIH Scientist Launch Game TMApp



NIAMS Kids Pages



Microscope Imaging Station®

From the NIH Director



Francis Collins, M.D., Ph.D., offers a message to high school graduates.

This video was requested by a motivated graduating senior at a high school in Ontario, but it speaks to students everywhere. May 19, 2011.

Featured Site







NIH Education Resources







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Drugs & Supplements

Videos & Tools

Español

Home → MedlinePlus Guide to Healthy Web Surfing

MedlinePlus Guide to Healthy Web Surfing









Consider the source -- Use recognized authorities

Know who is responsible for the content.

- Look for an "about us" page. Check to see who runs the site: is it a branch of the Federal Government, a non-profit institution, a
 professional organization, a health system, a commercial organization or an individual.
- There is a big difference between a site that says, "I developed this site after my heart attack" and one that says, "This page on heart attack was developed by health professionals at the American Heart Association."
- Web sites should have a way to contact the organization or webmaster. If the site provides no contact information, or if you can't easily find out who runs the site, use caution.

Focus on quality--All Web sites are not created equal

Does the site have an editorial board? Is the information reviewed before it is posted?

- This information is often on the "about us" page, or it may be under the organization's mission statement, or part of the annual report.
- See if the board members are experts in the subject of the site. For example, a site on osteoporosis whose medical advisory board is composed of attorneys and accountants is not medically authoritative.
- Look for a description of the process of selecting or approving information on the site. It is usually in the "about us" section and may be
 called "editorial policy" or "selection policy" or "review policy."
- Sometimes the site will have information "about our writers" or "about our authors" instead of an editorial policy. Review this section to find
 out who has written the information.

Be a cyberskeptic--Quackery abounds on the Web

Does the site make health claims that seem too good to be true? Does the information use deliberately obscure "scientific" sounding language

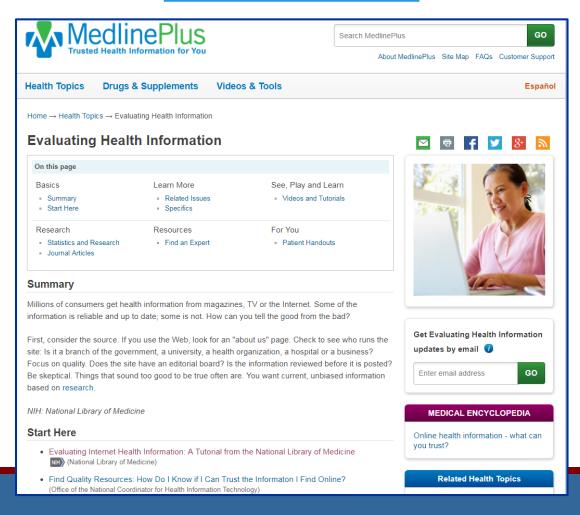


Guide to Healthy Web Surfing

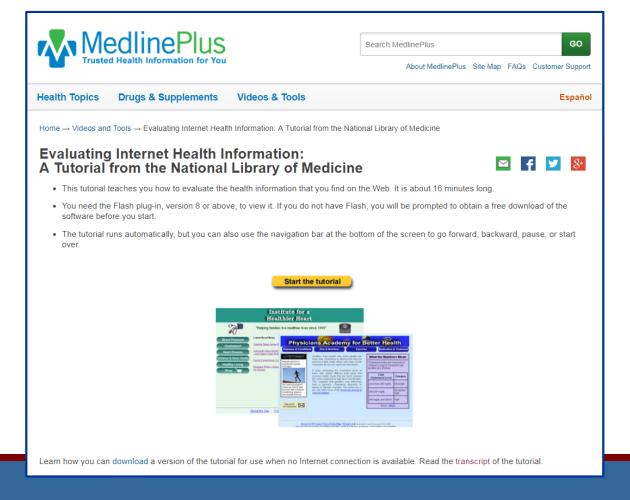


Evaluating Health Information

HEALTH TOPIC PAGE



TUTORIAL





Environmental Health



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Health Topics

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Español

Home → Health Topics → Environmental Health

Environmental Health

On this page		
Basics = Summary = Start Here = Latest News	Learn More Related Issues Specifics	See, Play and Learn No links available
Research Statistics and Research Clinical Trials Journal Articles	Resources Find an Expert	For You Children Teenagers Women



Summary

Our environment affects our health. If parts of the environment, like the air, water, or soil become polluted, it can lead to health problems. For example, asthma pollutants and chemicals in the air or in the home can trigger asthma attacks.

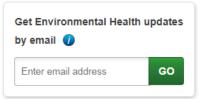
Some environmental risks are a part of the natural world, like radon in the soil. Others are the result of human activities, like lead poisoning from paint, or exposure to asbestos or mercury from mining or industrial use.

NIH: National Institute of Environmental Health Sciences

Start Here

- Environmental Health Topics from A to Z NIH) (National Institute of Environmental Health Sciences)
 Also in Spanish
- Tox Town NIH (National Library of Medicine)

 Also in Spanish







Related Health Topics

Air Pollution

Drinking Water

Electromagnetic Fields

Hazardous Waste

Indoor Air Pollution

Molds

Noise

Occupational Health

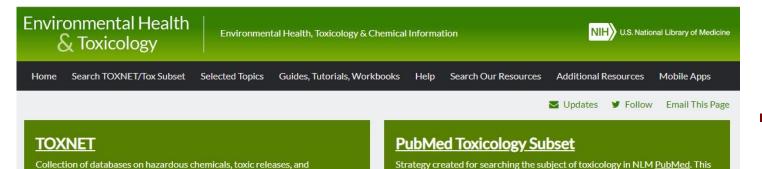
Oil Spills

Pesticides

Radiation Exposure

Water Pollution





AND tox[sb]

e.g. mercury



e.g. benzene, endocrine disruptor

Selected Topics

environmental health

- Arsenic
- Arts & Crafts Materials
- Climate Change
- Dietary Supplements
- Drinking Water and Water Pollution
- Environmental Justice
- Indoor Air
- Laboratory Safety
- Lead
- Mercury



Guides, Tutorials, Workbooks

- TOXNET Workbook (PDF, 8.8MB)
- TOXNET Class Schedule
- TOXNET Tutorials & Recordings, National Network of Libraries of Medicine (NNLM)
- TOXNET Guide on the Side, National Network of Libraries of Medicine (NNLM)
- Quick Tours

Q

- Basics of Searching the Hazardous Substances Data Bank
- Searching the LactMed Database



Q

Help

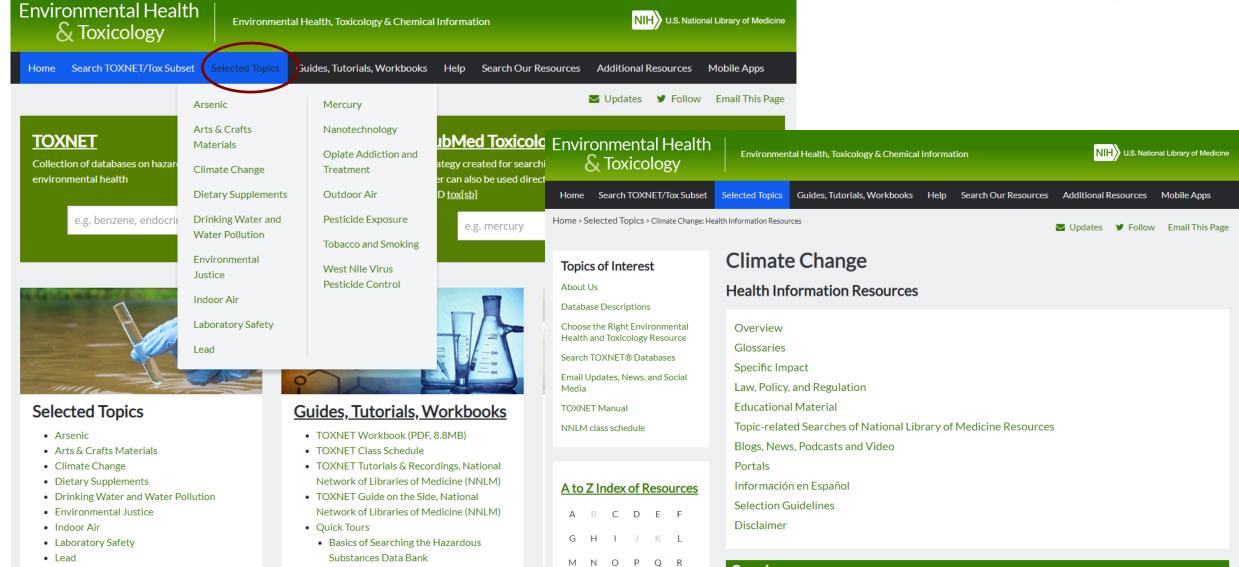
filter can also be used directly in PubMed in a search as tox[sb]. Example: lead

- A to Z Index of Environmental Health and Toxicology Resources
- About the NLM Toxicology & Environmental Health Information Program (TEHIP)
- Choose the Right Environmental Health and Toxicology Resource
- Contact us
- Email Updates
- Environmental Health, Toxicology and Chemical Database Descriptions

- Wide range of environmental and toxicology topics
- Health effects
- •Information for:
 - variety of professionals
 - the public
 - teachers and students
- Tutorials and guides provided

Environmental Health & Toxicology





S T U V W X

Searching the LactMed Database

Mercury

Overview

Climate Change - Health Topics
 World Health Organization (WHO)
 Climate and Health Program

· Climate Change and Human Health

Centers for Disease Control and Prevention (CDC)

Environmental Health, Toxicology & Chemical Information

NIH ILS National Library of Medicine

U.S. National Library of Medicine

National Network of Libraries of Medicine
Pacific Northwest Region

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Selected Topics

Guides, Tutor

Environmental Health & Toxicology

Environmental Health, Toxicology & Chemical Information

NIH U.S. National Library of Medicine

■ Updates Follow Email This Page

Home > Help > Choose the right environmental health and toxicology resource

Home Search TOXNET/Tox Subset

Selected Topics

Guides, Tutorials, Workbooks

Help Search Our Resources

Additional Resources

Mobile Apps

Choose the right environmental h

The National Library of Medicine's Environmental Health and Toxicology Po environmental health, and toxic releases. This guide can help you select the

If you're looking for:

Journal references to toxicology literature including birth defects informa

Summaries of peer-reviewed human health effects and emergency medica

Animal Toxicity Studies

Environmental Fate, Exposure, Standards and Regulations

Chemical/Physical properties and safety/handling/disposal of chemicals

Manufacturing, formulation and use of chemicals

Chemical names and synonyms

Chemical structures and structure searching/drawing capability

InChI and/or SMILES structure notations

List of links to NLM/NIH and other government agency information for a s

Drug-induced liver injury: Evidence-based information on prescription an herbals, and dietary supplements.

Carcinogenicity, mutagenicity, tumor promotion and tumor inhibition data Institute (NCI). CCRIS provides historical information from the years 198! updated.

Peer-reviewed mutagenicity test data from the U.S. Environmental Protect species, type of assay, test result and more. GENE-TOX covers the years 1' updated.

TOXNET

Collection of databases on hazardous chemicals, to environmental health

e.g. benzene, endocrine disruptor

TOXNET Workbook (PDF, 8,8MB)

TOXNET Tutorials & Recordings from the National Network of Libraries of Medicine Training Office (NTO)

TOXNET Class Schedule **Quick Tours**

ToxTutor: Learn essential principles of toxicology

Training

ology Subset

arching the subject of toxicology in NLM <u>PubMed</u>. This directly in PubMed in a search as tox[sb]. Example: lead

Q



Selected Topics

- Arsenic
- Arts & Crafts Materials
- Climate Change
- Dietary Supplements
- Drinking Water and Water Pollution
- Environmental Justice
- Indoor Air
- Laboratory Safety
- Lead
- Mercury



Guides, Tutorials, Workbooks

- TOXNET Workbook (PDF, 8.8MB)
- TOXNET Class Schedule
- TOXNET Tutorials & Recordings, National Network of Libraries of Medicine (NNLM)
- TOXNET Guide on the Side, National Network of Libraries of Medicine (NNLM)
- Quick Tours
 - Basics of Searching the Hazardous Substances Data Bank
 - Searching the LactMed Database



Help

- A to Z Index of Environmental Health and Toxicology Resources
- About the NLM Toxicology & Environmental Health Information Program (TEHIP)
- Choose the Right Environmental Health and Toxicology Resource
- Contact us
- Email Updates
- Environmental Health, Toxicology and Chemical Database Descriptions





National Library of Medicine

Environmental Health Student Portal

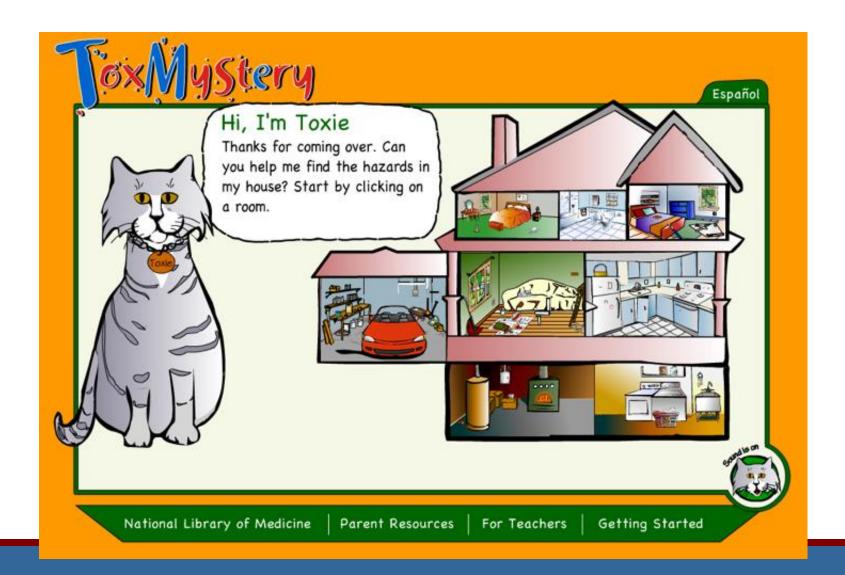
Connecting Middle School Students to Environmental Health Information



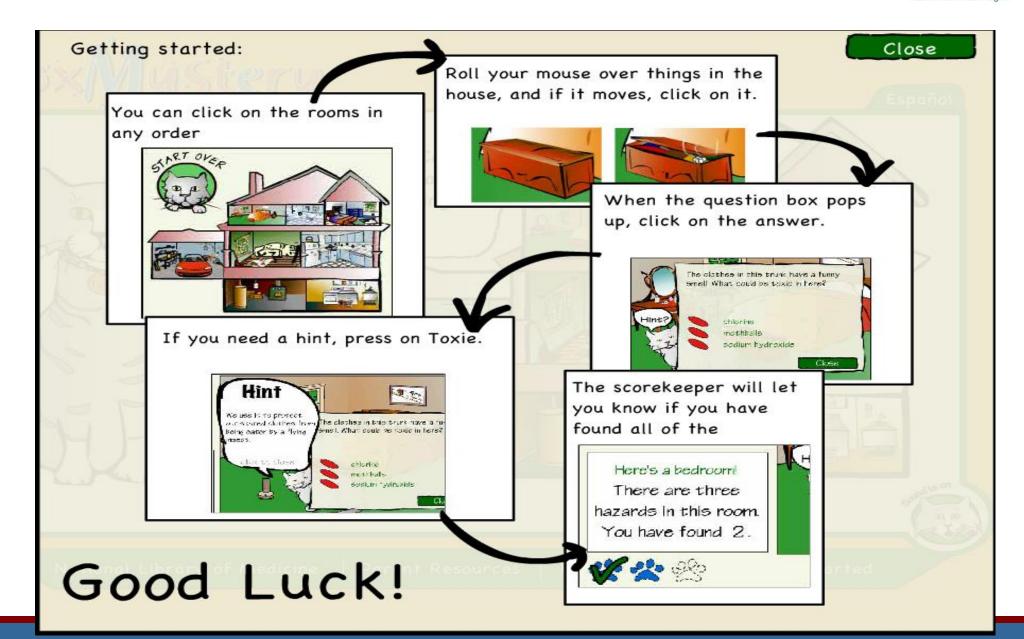


ToxMystery

Help Toxie the Cat find hazards in the house. Lesson plans available!



ToxMystery







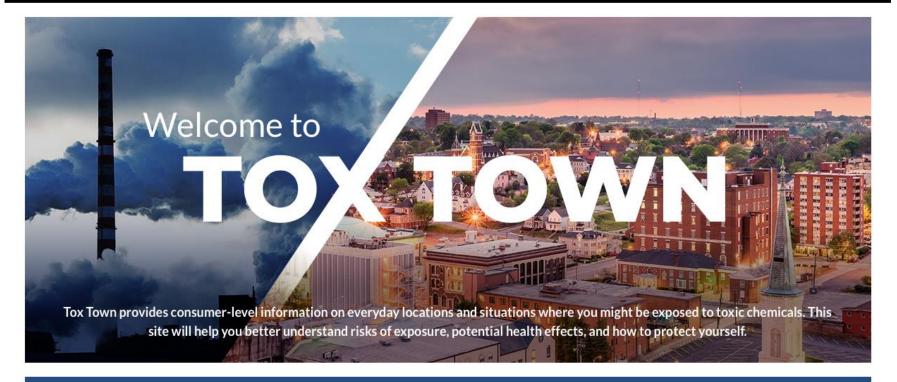


Q

Sources of Exposure ▼

Chemicals & Contaminants ♥ Diseases & Conditions Key Concepts & Glossary

Community Action Tools Tools for Teachers



Sources of Exposure

Explore places and situations where you might be exposed to hazardous chemicals and contaminants. Learn how you can minimize your risk.

EXPLORE



Tox Town

Resize Text

Topics Covered in this Course

ToxTutor is divided into the following sections:

- 1. Introduction to Toxicology
- 2. Dose and Dose Response
- 3. Toxic Effects
- 4. Interactions
- 5. Toxicity Testing Methods
- 6. Risk Assessment
- 7. Exposure Standards and Guidelines
- 8. Basic Physiology
- 9. Introduction to Toxicokinetics
- 10. Absorption
- 11. Distribution
- 12. Biotransformation
- 13. Excretion
- 14. Cellular Toxicology
- 15. Intuitive Toxicology and Risk Communication
- 16. Environmental Toxicology, Environmental Health, and One Health
- 17. Conclusion



Introduction

ToxTutor is a self-paced tutorial covering key principles of toxicology for users of the National Library of Medicine (NLM) chemical and toxicology databases. While a knowledge of anatomy and physiology is not required for viewing ToxTutor, the Introduction to the Human Body ☑ from the National Cancer Institute provides a good introduction to the topic.

What's New in ToxTutor? ₪ August 2018 Release

Continuing Education / Certificate of Completion

This course is approved for 3 contact hours for California Registered Environmental Health Specialists (REHSs) and National Environmental Health Association's (NEHA) REHS/RSs. To take the tutorial and receive a certificate, please register and complete the tutorial \(\text{through} \) our free learning management system.

ToxTutor link



Help FAQs TOXNET Fact Sheet Training Manual & Schedule



TOXNET Home > ChemIDplus Lite



SEARCH ChemID <i>plus</i>	BROWSE ChemIDplus	ADVANCED SEARCH
(automatic) ▼ (automatic		earch
Search for multiple terms by using this	format: 50-00-0 50-01-1 50-02-2	

About ChemIDplus



What is ChemIDplus?

Chemical database is a dictionary of over 400,000 chemicals (names, synonyms, and structures). ChemIDplus includes links to NLM and other databases and resources, including links to federal, state and international agencies. ChemIDplus Lite is designed for simple searching on name or registry. ChemIDplus Advanced helps users draw their own structures and perform similarity and substructure searches.

Updates: ChemIDplus records are updated daily.

Did you know



How do I lease/license the TOXNET databases?

The following TOXNET databases are available for lease: ChemIDplus, DIRLINE, CCRIS, GENE-TOX, HSDB, and TOXLINE.

For further information visit Leasing Data from the National Library of Medicine.

More FAQs

Support

Resources

Help Fact Sheet

Sample Record TOXNET FAQ

Contact Us

Email: tehip@teh.nlm.nih.gov Telephone: (301) 496-1131 Fax: (301) 480-3537



ChemIDplus



National Institute of Environmental Health Sciences Health & Education Research Funding Opportunities Careers & Training Nation Health & Education Research Funding Opportunities Careers & Training Nation

- Curricula for teachers
- Information for students
- Speaker bureau
- Summer Internship Program
- Fun activities for younger kids

NIEHS Health & Education resources





Kids Environment | Kids Health

A resource for kids, parents, and teachers to find fun and educational materials related to health, science, and the environment we live in today.

Hot Topics



Endocrine Disruptors Research

NIEHS has been a pioneer in conducting research on the health effects of endocrine disruptors for more than three decades, starting with the endocrine-disrupting effects of the pharmaceutical, diethylstilbestrol (DES).

Discover New Research



Essential Oils

Essential oils, which are obtained through mechanical pressing or distillation, are concentrated plant extracts that retain the natural smell and flavor of their source.

Find Out More



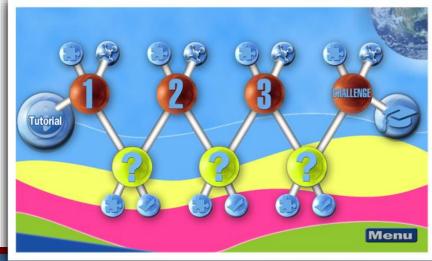
NLM iOS Apps

Games on iPad & iPhone: Base Chase, Run4Green, TOXinvaders, Bohr Thru













Genomics/Genetics



Genomic Health/Science Literacy

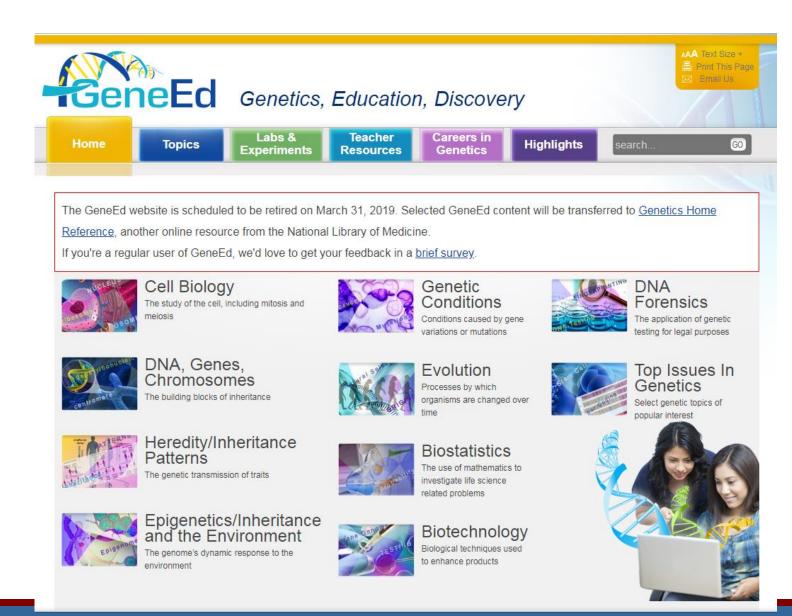
- Lack biology basics
- Lack mathematical concepts
- Low health literacy

- Biomedical professions
- Medical treatment
- Understand basics of health conditions





GeneEd



GeneEd home page



Education

Educational materials about genetics and genomics



Smithsonian NHGRI Genome

A genomics exhibition from the Smithsonian and NHGRI



About The Human Genome Project

information on the history, progress and impact of the HGP



Talking Glossary of Genetic Terms

Terms and definitions used in genetic research with multimedia



Genomic Careers

Information on careers in genomics and



National DNA Day

A unique day when everyone can learn more about genomics and genetics



Genetic Education Resources for Teachers

Teaching plans to present the science of genetics and genomics



Online Genetic Education Resources

A list of online resources for learning about genomics and genetics



Clearly written information on the institute, genetic research and genetic concepts



Online Education Kit

A web-based resource outlining the major history and developments of genomics

Highlights

Annual National DNA Day lecture to honor Congresswoman Louise M. Slaughter



For NHGRI's National DNA Day on April 25, Olivier Noel, Ph.D., founder and CEO of DNAsimple, will present "Bench to Bedside to Business: A Talk on Startups in Science" for the newly named Louise M. Slaughter National DNA Day lecture, which honors the late Congresswoman. The media and the public are invited to attend at the Lister Hill Center Auditorium on the NIH campus.

Celebrate 15 ways genomics is influencing our lives



On April 5th, NHGRI will launch the '15 for 15' Celebration to honor the 15th anniversary of the Human Genome Project's completion. Beginning April 5th, and each business day leading up to National DNA Day on April 25th, NHGRI will reveal one of 15 topics that illustrate the

See Also

Education and Community Involvement Branch

GenomeTV

Genome Advance of the Month

Education Archive

On Other Sites:

Genome: Unlocking Life's Code NHGRI Smithsonian Exhibition

NHGRI's YouTube Channel



National Human Genome Research Institute education page





- Traveling exhibit
- Monthly newsletter for teachers
- Teacher features
- Interactive learning
- Timeline
- •Infographics

Unlocking Life's Code



Your Guide to Understanding Genetic Conditions

Search X Q



Health Conditions

Genes

Chromosomes & mtDNA

Resources

Help Me Understand Genetics

Genetics Home Reference provides consumer-friendly information about the effects of genetic variation on human health.





Health Conditions

More than 1,100 health conditions, diseases, and syndromes

More than 1,300 genes and the

health effects of genetic

Browse A-Z

Genes



New & Updated Pages

New Pages

17q12 duplication

ACAD9 deficiency

primary coenzyme Q10 deficiency

More New Pages...

Updated Pages

5-alpha reductase deficiency

Erdheim-Chester disease

L1 syndrome

Usher syndrome

Bulletins

More Updated Pages...

Browse A-Z

changes



Health conditions

- Genes
- Chromosomes and DNA
- Resources
- Genetic handbook

Genetics Home Reference



NLM Traveling Exhibits



NLM's Harry Potter's World

v Potter Genetic Traits in Harry Potter

grade level: 5-8 subject: science and technology



time needed

two to four 40-minute class periods

Four 40-minute class periods for younger students with little knowledge of genetics (two periods for Pre-lesson Activity and Class 1, and the other two periods for Class 2)

Two 40-minute class periods for older students with strong knowledge of genetics (one period for Pre-lesson Activity and Class 1 and the second period for Class 2)

description

The purpose of this lesson is to give students an introductory understanding of genetic inheritance. Students review and become familiar with basic genetic concepts and terms, such as DNA, chromosome, gene, allele, homozygous, heterozygous, recessive and dominant genes, genotype, phenotype, complex traits, Mendelian inheritance, and Punnett square. Students apply these to identify and examine several examples of simple and complex genetic traits in several characters in *Harry Potter*. Students also examine inheritance patterns of magical ability in *Harry Potter*, and use the concepts they have learned to identify possible genotypes of the magical abilities demonstrated by several characters in the series.

Note: The models of genetic inheritance presented in this lesson plan have been simplified so that students learn basic terms and concepts about genes and genetically inherited physical characteristics among people. In reality, many of the traits used as examples—and most traits, in general—tell a far more complicated story about inheritance than discussed in this lesson plan. For furthering students' learning and exploration of the complex genetic studies, please see Extension Activity 2 below.

OPEN ALL

- learning outcomes
- background information
- vocabulary
- materials
- pre-lesson activity
- class 1 procedures
- class 2 procedures

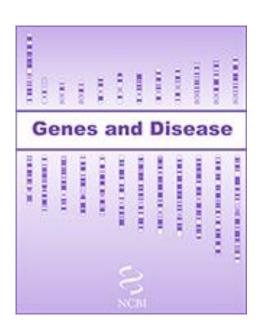




NCBI Bookshelf

Genes and Diseases

- Organized by the parts of the body that genetic disorders affect
- Over 80 genetic disorder summaries
- Images and interesting facts
- PDF downloads of chapters
- Links to related research literature and pertinent websites



Genes and Diseases from NCBI Bookshelf



Base Chase





Literacy/Education Resources









Public Health Genomics











discover. educate. advocate.









Interdisciplinary Resources



NLM Exhibition Program

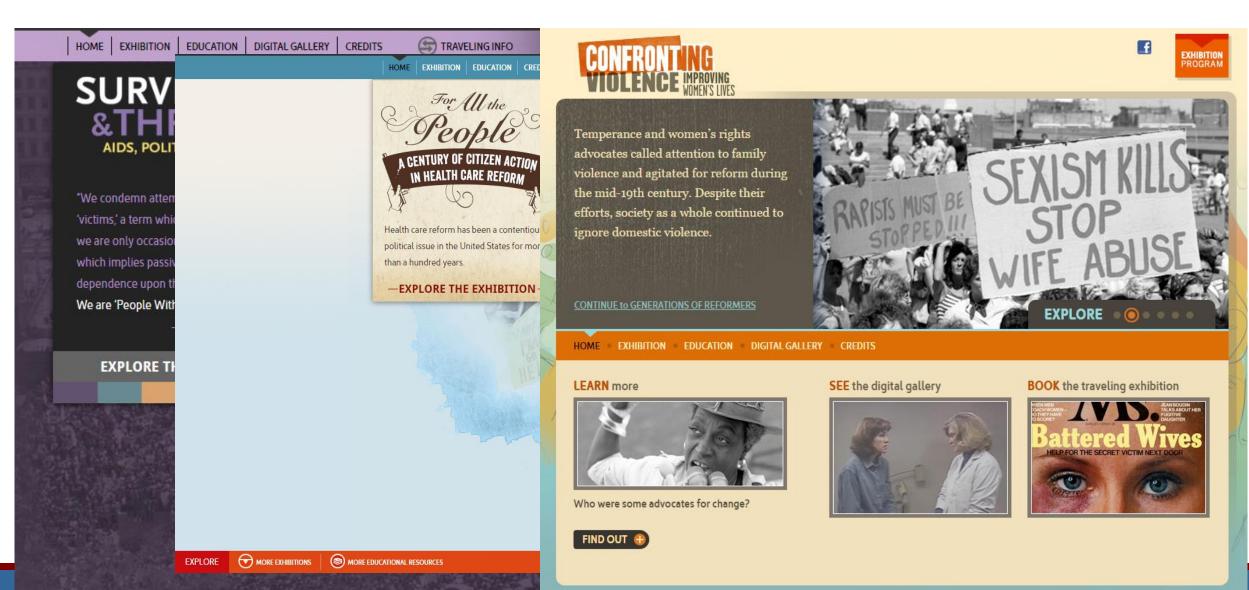


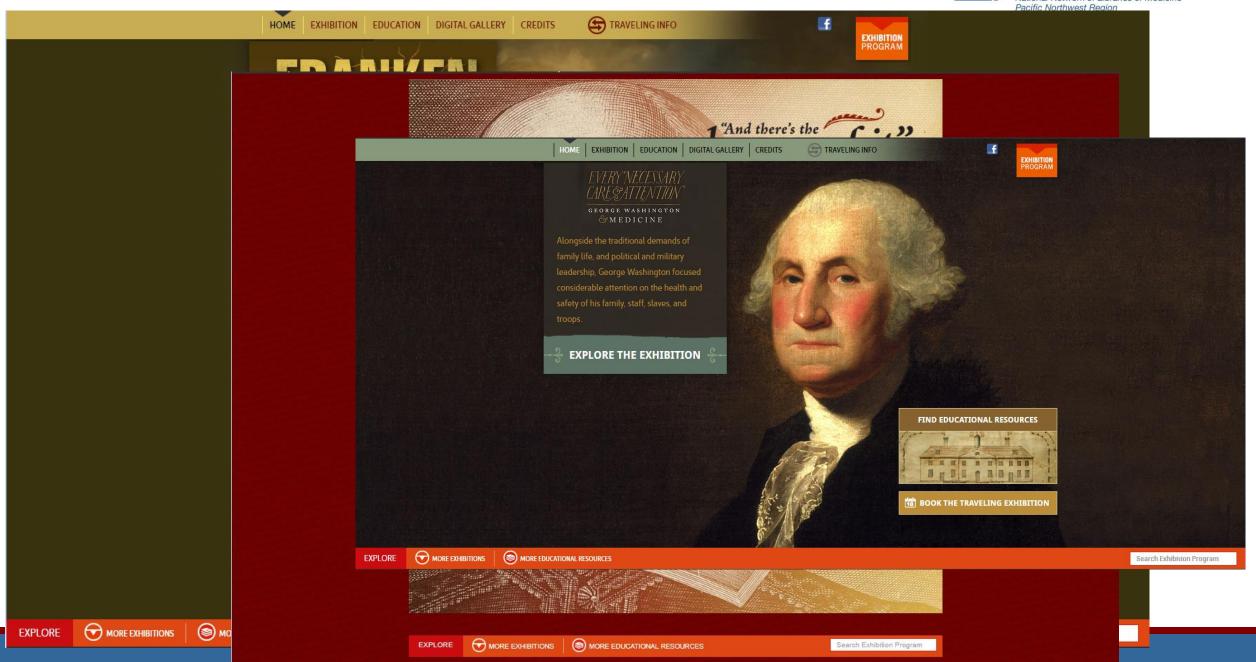
NLM Exhibition Program

The Exhibition Program creates lively and informative exhibitions and educational resources that enhance awareness of and appreciation for the collections of the National Library of Medicine. Explore. Discover. Enjoy.



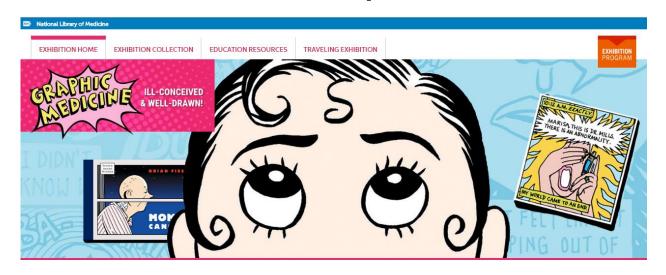
Focus on Health Issues

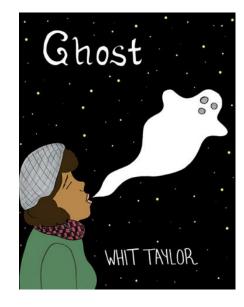


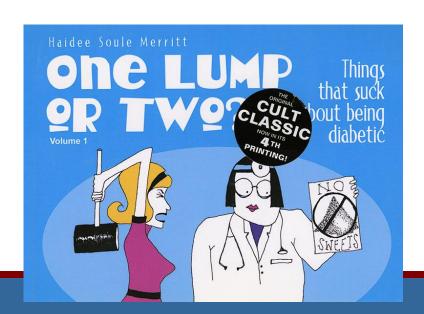




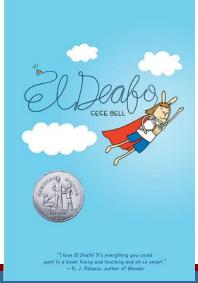
Comics / Graphic Novels

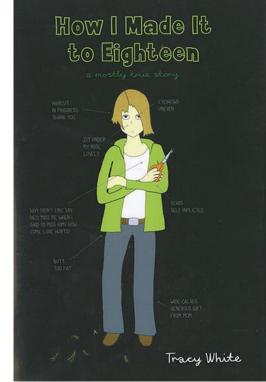














NNLM Resource Picks March 2017 session recording

How to make the most of your National Library of Medicine traveling banner exhibition!





Recording of March 2017 NNLM Resource Picks







COLLECTIONS & EXHIBITIONS

SEARCH Q

ARCHIVES & MODERN MANUSCRIPTS

Executivo Mansion, August 22, 6.30 P.M tent has continued to take FILMS & VIDEOS



PRINTS & PHOTOGRAPHS



RARE BOOKS & JOURNALS



NLM DIGITAL COLLECTIONS



EXHIBITION PROGRAM



FEATURED COLLECTIONS



LECTURE SERIES



NLM History of Medicine Division



Careers



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Health Topics

Drugs & Supplements

Videos & Tools

Home → Health Topics → Health Occupations

Health Occupations

Also called: Health careers, Health professions, Medical occupations, Medical professions

On this page		
Basics Summary Start Here Latest News	Learn More « Specifics	See, Play and Learn No links available
Research	Resources	For You
Statistics and ResearchJournal Articles	 Find an Expert 	 No links available

Summary

Every day, around the clock, people who work in the health care industry provide care for millions of people, from newborns to the very ill. In fact, the health care industry is one of largest providers of jobs in the United States. Many health jobs are in hospitals. Others are in nursing homes, doctors' offices, dentists' offices, outpatient clinics and laboratories.

To work in a health occupation, you often must have special training. Some, like doctors, must have more than 4 years of college.

Bureau of Labor Statistics

Start Here

 Occupational Outlook Handbook: Healthcare Occupations (Bureau of Labor Statistics) Also in Spanish

Latest News

Nurses Learn How to Get Patients to Say 'Yes' to Blood Thinners (08/17/2017, HealthDay)



Topics

Experiments

Teacher Resources Careers in Genetics

Highlights

Print This Page

GO









by ema

Enter e

ME

Types o

Choosin Service



Careers in Genetics

The study of genetics and genomics is improving our understanding of the biology of health and disease, and that of our biological world in ways that was never before possible. These advancements have wide applications to biology, health, and society. Opportunity to use training in genetics and genomics exists in a range of fields, including in medicine, academic research, law, journalism, agriculture, commercial industries, and education to name a few

Becoming a Scientist

Description: Detailed articles, video interviews with various scientists, and additional information resources for students curious about becoming a scientist Source: Cold Spring Harbor Laboratory | URL: http://library.cshl.edu/oralhistory/topic/scientific-experience/becoming-scientist/

Careers in Human Genetics

Description: Information on careers in human genetics

Source: The American Society of Human Genetics | URL: http://www.ashq.org/education/careers.shtml

Genetic Counseling

Description: Genetic counselors are health professionals who help people faced with the possibility of a genetic disease to make informed decisions about their futures.

Source: Genome Research Limited and Wellcome Trust Sanger Institute | URL: http://www.yourgenome.org/stories/genetic-counselling

GeneticsCareers.org

Description: Explore real genetics career job postings on this site developed by The American Society of Human Genetics and the Genetics Society of America Source: GeneticsCareers.org | URL: http://geneticscareers.org

Genomic Careers - Find Your Future

Description: Video interviews with genomic professionals, information on genomic careers, a tool for rating your favorite genomic careers, and an opportunity to test your knowledge of careers in this field

Source: National Human Genome Research Institute | URL: http://www.genome.gov/GenomicCareers/index.cfm

Genomics: Towards a Healthier You

Description: A webcast presenting information on why genetics is important to health, plus information on genetic counseling as a career. The singer and performer T-Boz shares her personal story about living with sickle cell anemia as one example of genetic health issues

Source: National Human Genome Research Institute | URL: https://www.youtube.com/watch?v=Q5ZrowNN7MQ

NLM Traveling Exhibits





- > High School
- > Higher Education
- > Post-Graduate / Medical Schools

LESSON PLANS & ADDITIONAL RESOURCES

ONLINE ACTIVITIES

SUGGESTED READINGS

HEALTH HEADLINES

ASPIRINGDOCS.ORG® by the

http://www.aspiringdocs.org ASPIRINGDOCS.ORG® is supported Resources section will help high school

National Native American

http://aaip.site-ym.com/?page=NNAYI

Collaboration and Care **Exhibition:** Part of a Team

PHYSICIAN ASSISTANTS

HOME • EXHIBITION • EDUCATION • CREDITS

Introduction

Part of a Team

Diversity Makes a Difference

Collaboration with New Partners

Respond to Community Needs

Care Around the World













A PA student (right) from George Washington University observes a doctor performing an eye exam during a rotation, Washington, DC, ca. 1970s

Courtesy National Library of Medicine

PREVIOUS | NEXT (1/8)

PAs are educated and trained to collaborate with other health professionals. During their coursework and clinical training, PAs learn from and work with physicians, other PAs, nurses, and additional health care professionals in a variety of settings.

American physician Eugene Stead created the profession's partner-based foundation. He modeled it after the collaborative relationship between Dr. Amos Johnson and his assistant, Buddy Treadwell, who had worked together in rural North Carolina since the 1940s. Dr. Stead opened the first academic PA program at Duke University in 1965, which educated students to

*** UNDERGRADUATE EDUCATION**

♦ The first step to a promising career in medicine is to a practical information on the types of courses to take v medical school, the broad range of medical careers or

* MEDICAL SCHOOL

Once you are in medical school, you will be launched elective opportunities in the fourth year, medical spec training programs, and medically focused financial aid

* RESIDENCY AND FELLOWSHIPS

Once you complete medical school, you need to enter depending on the medical specialty you choose. After additional medical training if you want to become high residencies and learn about fellowship opportunities, t resources and organizations available to help you alor

High School

TIMELINE

American Indian Science ar **Programs**

RESOURCES

http://www.aises.org/what/programs/preco AISES offers a variety of programs fo and international science and engine technology-based initiatives.

Colleges (AAMC)

them navigate through the process of

Association of American In

* PRACTICING MEDICINE

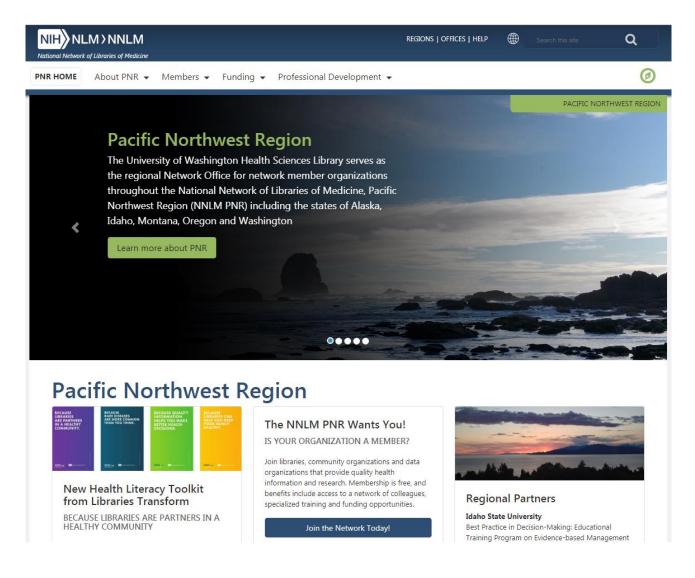


NNLM PNR

- Direct students and families to freely accessible health science resources
- Incorporate NLM/NIH educational resources to supplement curricula and reinforce learning
- Collaborate with other departments and the broader community
- Look to NNLM PNR for great resources, classes, webinars, funding and other opportunities

NNLM PNR

https://nnlm.gov/pnr





Thank You!



Carolyn Martin, MLS, AHIP

Consumer Health Coordinator

National Network of Libraries of Medicine

Pacific Northwest Region (NNLM PNR)

martinc4@uw.edu